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NAVAL POSTGRADUATE SCHOOL

Monterey, California

MIZLANT 81 DATA REPORT

RESULTS OF AN OCEANOGRAPHIC CRUISE
TO THE GREENLAND SEA
OCTOBER - NOVEMBER 1981

BY

Robert H. Bourke
and
Robert G. Paquette

August 1985

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Prepared for:
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NAVAL POSTGRADUATE SCHOOL
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report presents plots of property profiles for each of the 122 oceanographic stations occupied by the U.S. Coast Guard Icebreaker over the continental shelf and slope waters off the east coast of Greenland in October & November 1981. A Neil Brown Mark III CTD was used to obtain temperature and salinity profiles to the sea floor in shallow water and at least to 600m in deeper water. In addition to temperature and salinity profiles, plots of sound speed and density (sigma-t) are shown.

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MIZLANT 81 DATA REPORT

RESULTS OF AN OCEANOGRAPHIC CRUISE TO THE GREENLAND SEA OCTOBER-NOVEMBER 1981

by

Robert H. Bourke and Robert G. Paquette

I. INTRODUCTION

This report presents the oceanographic data acquired during the cruise of the U. S. Coast Guard ice breaker NORTHWIND (WAGB-282) to the northern part of the East Greenalnd Polar Front (EGPF) in the Greenland Sea during October and November 1981. This cruise has been designated Arctic East 1981 (AE81), but for continuity with past cruises is also termed MIZLANT 81. The cruise had as its primary objective a close examination of the EGPF between about 75° and 80°N. This was one of the rare sets of oceanographic observations in this area in autumn and the first done with close-spaced stations and a modern, high-resolution CTD. The NORTHWIND covered over 1600 km of track within the survey area. One hundred twenty-two CTD stations were occupied at spacings varying from 5 to 30 km. These stations were supplemented by 123 not always successful XBT drops. The latter were used between stations and in the otherwise unsampled portion of the track between 69°-27'N and the beginning of regular stations at

74°-51.5°N. These XBT results were sent to the NAVOCEANO representative to COMSUBDEVRON TWELVE, Naval Submarine Base, New London, Groton, Connecticutt. A few XBT's were used to extend CTD lines.

The EGPF was found strongly delineated by the Polar Water-Atlantic Intermediate Water (PW-AIW) contrast. It was made particularly striking by the Return Atlantic Current (RAC), a core of warm southward-flowing AIW submerged beneath the PW and penetrating, somewhat modified, onto the shelf. The RAC contained considerable thermal finestructure in most places. The eastern edge of the EGPF, over the RAC, was marked by a strong geostrophic jet.

Previous reportings of cruise results were made by Paquette (1982), Perdue (1982) and, in a scientific paper, by Paquette, Bourke, Newton and Perdue (1985).

II. MORE DETAILS OF THE CRUISE

The scientific party boarded NORTHWIND between 9 and 10 October 1981 in Reykjavik, Iceland. The members of the scientific party and their affiliations were:

Dr. M. Allan Beal, Arctic Submarine Laboratory, NOSC San Diego, California, Chief Scientist.

Dr. Robert H. Bourke, Naval Postgraduate School, at that time on sabbatical leave at Scott Polar Research Institute, Cambridge University, Cambridge, England.

Dr. John L. Newton, Science Applications, Inc., La Jolla, California.

LT William F. Perdue, Graduate Student,

Naval Postgraduate School, Monterey, California:

Mr. Jerrold G. Norton, Naval Postgraduate School.

Mr. Kim O. McCoy, Naval Postgraduate School.

The cruise track and locations of CTD stations are indicated in Figure 1. Sampling commenced on 17 October and terminated four weeks later on 14 November. A listing of the locations of all CTD stations and ancillary climatological data at each station is shown in Appendix A.

Wind speeds were generally low until 29 October, after which they were generally above 15 knots, reaching 35 knots on 10-11 November. Thereafter they became moderate, with some periods of speed below 10 knots. Air temperatures were well below freezing, especially during the latter half of the cruise.

All of the sampling was done from the ship. Darkness and poor visibility prevented using the ship's helicopters for oceanographic measurements. Adequate visibility and the need for helicopter-based sampling never coincided. However, the helicopters were of considerable utility in ice reconnaissance.

III. MEASUREMENTS

The primary oceanographic instrument was the Neil Brown Instrument Systems (NBIS) Mark III CTD. Data were collected, stored, and displayed using a Hewlett-Packard

9835B computer and 9872A x-y flat-bed plotter. As in the past, an extension was bolted on to the protective frame of the CTD; the lower part of the frame and the extension were covered with coarse wire mesh to protect the sensors from contact with the bottom and with ice. No apparent deterioration in sensor accuracy or response have been noted using this technique.

Some CTD difficulties were experienced during the coldest weather. It was not possible to keep the instrument warm enough to prevent ice formation on the sensors and occasional complete failure to operate. These problems were cured by several minutes "soaking" and up-and-down flushing of the instrument in the sea before each lowering.

The temperature and conductivity sensors of the NBIS CTD were calibrated at NPS prior to the cruise. The calibrated pressure sensor had a 1600 dbar range. The sampling rate of the CTD was set to about 0.4 m of depth per sample. Checking of the temperature and conductivity sensors during the cruise was done by means of a single Nansen bottle and reversing thermometers placed immediately above the CTD. Sample salinities were determined with a deck salinometer. Because of breakage of all but 4 vials of standard water only 17 of the salinity comparisons were reliable. The average deviations of the CTD from reversing bottle results were approximately +0.004°C and +0.006

o/oo in salinity, about the limit of error for such measurements; therefore, no corrections were applied.

The plots of properties shown in Appendix B are from data which has been edited, despiked and smoothed with a centered 5-point running mean.

IV. REFERENCES

Paquette, Robert G., Cruise Report, USCGC NORTHWIND 1981, October- November 1981, Naval Postgraduate School, Monterey, California, Informal Report, 12 February 1982, 13 pp.

Perdue, William F., Oceanographic Investigation of the East Greenland Polar Front in Autumn, Master's Thesis, Naval Postgraduate School, Monterey, California, March 1982, 80 pp.

Paquette, Robert G., Robert H. Bourke, John L. Newton and William F. Perdue, The East Greenland Polar Front in Autumn, J. Geophys. Res. 90 (C3), 4866-4882 (May 20, 1985).

APPENDIX A

Explanation of Heading Codes

The heading of the printed output uses the coding from NODC Publication M-2, August 1964, with a few exceptions. Heading entries which are not self-explanatory are as follows: MSQ is the Marsden square, and DPTH is the water depth in meters. Wave source direction (WVD) is in tens of degrees, but the direction 00 indicates calm seas due to ice dampening. The significant wave height is coded by Table 10 (code - 2 = height in meters). Wind speed, V, is coded as Beaufort force, Table 17. The barometer is in millibars, less 1000 if more than 3 digits; wet and dry bulb temperatures are in degrees C. The present weather is from Table 21 with cloud type and amount from Tables 25 and 26, respectively. The combination 4 X 9 indicates that clouds cannot be observed usually because of fog conditions. The visibility is from Table 27 which is roughly in powers of two with code 4 = 1-2 km. The ice concentration, ICE, is in tenths; amounts less than one tenth are preceded by a minus sign and indicate concentrations in powers of ten, e.g., 10^{-4} = -4.

The entry, NAV, is a code to identify the accuracy of each station position based upon the navigation system used. Code 1 indicates a position determined by visual sightings, radar or by navigation satellite; Code 2 a position determined by Omega or Loran; and Code 3 a

position determined by dead reckoning.

The heading data are listed sequentially with increasing station number. Because of data recovery problems five stations are out of order: 12, 21, 27, 48 and 71. These are listed at the end.

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N74-51.5	W010-11.9	254	10	17	81	08.8	001-	3110	1	-6	07	1	26	2	002	-07.0	-07.7	1	6	5	7
31	NW	N74-51.5	W010-11.9	254	10	17	81	10.8	002-	3110	1	-6	07	1	26	2	002	-07.0	-07.7	1	6	5	7
31	NW	N75-02.6	W010-47.9	254	10	17	81	15.9	003-	2708	1	3	07	0	23	3	002	-07.7	-08.6	1	6	1	7
31	NW	N75-08.0	W011-08.2	254	10	17	81	20.4	004-		1		00	0	00	0	003	-12.2	-12.9	0		0	7
31	NW	N75-15.6	W010-05.0	254	10	18	81	03.3	005-	2743	1	7	00	0	35	3	004	-08.6	-09.2	0		0	7
31	NW	N75-24.0	W009-03.3	253	10	18	81	08.2	006-	2872	1	-2	00	0	34	3	006	-05.0	-05.2	0		0	7
31	NW	N75-35.6	W007-45.1	253	10	18	81	11.5	007-	3068	1	8	00	0	03	6	005	-01.2	-02.0	1	6	4	7
31	NW	N75-49.1	W006-52.0	253	10	18	81	14.8	008-	2780	1	0	04	2	04	4	006	-00.9	-02.1	1	6	6	7
31	NW	N76-01.2	W006-00.3	253	10	18	81	17.2	009-		1	0	04	3	04	6	007	-00.3	-00.3	2	6	8	7
31	NW	N76-11.6	W006-46.0	253	10	18	81	19.6	010-	2438	1	-4	00	0	03	5	006	-00.3	-00.3	2	6	7	7
31	NW	N76-21.5	W007-32.2	253	10	18	81	22.4	011-	1268	1	5	00	0			008						
31	NW	N76-17.1	W007-23.0	253	10	19	81	07.7	013-	1380	1	5	00	0	35	6	008	-06.8	-08.2	1	6	8	6
31	NW	N76-19.3	W007-36.2	253	10	19	81	09.2	014-	1242	1	8	00	0	36	6	007	-07.2	-07.5	1	6	8	7
31	NW	N76-26.0	W007-47.0	253	10	19	81	13.8	015-	0684	1	8	00	0	35	4	007	-07.8	-08.3	1	6	8	6
31	NW	N76-33.0	W008-07.2	253	10	19	81	20.4	016-	0309	1	10	00	0	06	5	010	-04.3	-04.4	7	7	9	1
31	NW	N76-37.9	W008-14.9	253	10	20	81	05.0	017-	0320	1	10	00	0	35	6	012	-06.6	-06.6	7	7	9	2
31	NW	N76-46.1	W008-23.3	253	10	20	81	14.7	018-	0350	1	10	00	0	30	2	012	-08.9	-09.2	2	7	8	6
31	NW	N76-49.2	W008-49.8	253	10	20	81	18.8	019-	0368	1	10	00	0	00	0	011	-08.0	-08.6	1	7	7	7
31	NW	N76-49.2	W008-49.8	253	10	20	81	19.0	020-	0368	1	10	00	0	00	0	011	-08.1	-08.6	1	7	7	7
31	NW	N76-49.3	W008-55.3	253	10	21	81	15.8	022- 1	0350	1	10	00	0	00	0	012	-13.0	-13.2	1	7	1	7
31	NW	N76-49.2	W008-55.0	253	10	21	81	17.0	022- 2	0350	1	10	00	0	00	0	011			1	7	1	7
31	NW	N76-49.0	W008-55.2	253	10	21	81	18.1	022- 3	0359	1	10	00	0	04	2	010	-15.6	-15.6	0		0	7
31	NW	N76-48.9	W008-55.1	253	10	21	81	19.1	022- 4	0359	3	10	00	0	04	2	010	-15.9	-15.9	7	7		6
31	NW	N76-48.7	W008-55.0	253	10	21	81	20.1	022- 5	0350	3	10	00	0	00	0	009	-14.6	-14.4	0		0	7

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N76-48.6	W008-55.4	253	10	21	81	21.1	022- 6	0332	1	10	00	0	13	2	008	-14.2	-14.3	0		0	7
31	NW	N76-48.6	W008-55.2	253	10	21	81	22.0	022- 7	0339	3	10	00	0	15	2	007	-10.6	-10.8	0		0	7
31	NW	N76-48.6	W008-55.3	253	10	21	81	23.0	022- 8	0350	1	10	00	0	16	2	008	-12.0	-12.0	1	7	3	7
31	NW	N76-48.6	W008-55.1	253	10	22	81	00.1	022- 9	0341	1	10	00	0	13	3	007	-12.0	-12.0	1	7	1	7
31	NW	N76-47.4	W008-57.8	253	10	22	81	02.0	022-10	0340	1	10	00	0									
31	NW	N76-47.4	W008-57.8	253	10	22	81	08.8	022-10	0350	1	10	00	0									
31	NW	N76-47.4	W008-57.8	253	10	23	81	09.3	023- 1	0335	1	10	00	0	00	0	998	-01.5	-01.5	7	7		6
31	NW	N76-47.3	W008-57.6	253	10	23	81	10.2	023- 2	0335	1	10	00	0	00	0	998			7	7		5
31	NW	N76-47.0	W008-57.7	253	10	23	81	11.3	023- 3	0329	1	10	00	0	00	0	998	-01.1	-01.1	7	7		5
31	NW	N76-46.8	W008-57.9	253	10	23	81	12.3	023- 4	0323	3	10	00	0	11	2	998	-00.5	-00.3	7	7	9	5
31	NW	N76-46.5	W008-58.0	253	10	23	81	13.3	023- 5	0323	3	10	00	0	00	0	998	-00.4	-00.3	2	7	8	5
31	NW	N76-46.4	W008-58.6	253	10	23	81	14.3	023- 6	0325	1	10	00	0	00	0	998	-00.2	-00.3	2	7	8	5
31	NW	N76-46.3	W008-59.3	253	10	23	81	15.3	023- 7	0324	1	10	00	0	00	0	998	-00.0	-00.2	7	7	8	5
31	NW	N76-46.3	W008-59.9	253	10	23	81	16.3	023- 8	0333	1	10	00	0	00	0	999	-00.0	-00.2	7	7	8	5
31	NW	N76-46.2	W009-00.0	253	10	23	81	17.3	023- 9	0333	3	10	00	0	00	0	998	00.0	00.0	7	7	8	5
31	NW	N76-46.2	W009-00.0	253	10	23	81	18.3	023-10	0359	1	10	00	0	00	0	998	00.0	00.0	7	X	9	5
31	NW	N76-46.2	W009-00.0	253	10	23	81	19.3	023-11	0359	3	10	00	0	00	0	998	01.0	01.0	7	X	9	5
31	NW	N76-45.9	W009-00.9	253	10	23	81	20.3	023-12	0368	1	10	00	0	00	0	998	00.0	00.0	2	7	8	5
31	NW	N76-45.7	W009-01.6	253	10	23	81	21.3	023-13	0368	1	10	00	0	00	0	998	00.0	00.0	2	7	8	5
31	NW	N76-45.6	W009-01.3	253	10	23	81	22.3	023-14	0337	1	10	00	0	00	0	998	00.0	00.0	2	7	8	5
31	NW	N76-45.5	W009-01.5	253	10	23	81	23.3	023-15	0333	1	10	00	0	00	0	998	00.0	00.0	2	7	8	5
31	NW	N76-45.4	W009-01.6	253	10	24	81	00.2	023-16	0328	1	10	00	0	10	1	998	00.2	-00.2	7	X	9	5
31	NW	N76-45.2	W009-01.9	253	10	24	81	01.2	023-17	0330	1	10	00	0	08	2	998			7	X	9	5
31	NW	N76-45.0	W009-02.6	253	10	24	81	02.1	023-18	0330	3	10	00	0	07	2	998			7	X	9	5

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N76-49.9	W009-03.4	253	10	24	81	03.2	023-19	0336	1	10	00	0	08	2	996	00.2	-00.2	7	X	9	5
31	NW	N76-44.9	W009-04.5	253	10	24	81	03.2	023-20	0340	1	10	00	0	06	2	997	00.2	-00.2	7	X	9	5
31	NW	N76-44.6	W009-05.3	253	10	24	81	05.1	023-21	0340	1	10	00	0	09	2	996			7	X	9	5
31	NW	N76-44.6	W009-05.6	253	10	24	81	06.1	023-22	0328	1	10	00	0	09	2	997			7	X	9	5
31	NW	N76-44.4	W009-07.3	253	10	24	81	07.2	023-23	0327	1	10	00	0	10	3	996			7	X	9	5
31	NW	N76-46.7	W008-25.3	253	10	24	81	19.1	024-	0350	1	10	00	0	17	3	998	-03.2	-03.2	7	X	9	5
31	NW	N76-35.9	W007-53.0	253	10	25	81	02.1	025-	0318	1	09	00	0	17	3	006	-03.0	-03.2	7	X	9	5
31	NW	N76-31.8	W007-40.6	253	10	25	81	04.6	026-	0318	1	09	00	0	17	3	007	-03.0	-03.2	7	X	9	5
31	NW	N76-31.8	W007-40.6	253	10	25	81	04.6	026-UP	0318	1	09	00	0	17	3	007	-03.0	-03.2	7	X	9	5
31	NW	N76-32.0	W006-50.6	253	10	25	81	10.0	028-	1010	1	08	00	0	09	3	008	-01.0	-01.0	7	X	9	5
31	NW	N76-29.9	W006-27.1	253	10	25	81	13.5	029-	1718	1	05	00	0	11	3	009	00.0	00.0	4	X	9	1
31	NW	N76-28.5	W006-20.8	253	10	25	81	15.1	030-	1880	1	0	12	3	17	3	009	-01.1	-01.5	4		0	3
31	NW	N76-25.6	W005-43.7	253	10	25	81	17.2	031-	2250	2	0	18	3	24	3	010	-02.8	-02.8	4	7	8	3
31	NW	N76-23.1	W005-21.3	253	10	25	81	19.2	032-	2348	2	0	18	3	24	3	010	-02.5	-02.5	4	7	8	4
31	NW	N76-34.5	W005-22.9	253	10	25	81	21.3	033-	2150	1	0	18	2	21	1	010	-03.0	-03.0	1	7	5	4
31	NW	N76-39.2	W005-34.7	253	10	25	81	23.6	034-	1970	1	0	18	2	26	3	010	-03.8	-03.8	4	X	9	6
31	NW	N76-45.3	W005-42.5	253	10	26	81	01.9	035-	1672	1	0	19	3	23	3	010	-03.8	-03.8	4	X	9	6
31	NW	N76-46.3	W005-42.9	253	10	26	81	03.5	036-	1618	3	0	20	3			010			4	X	9	6
31	NW	N76-51.4	W004-50.4	253	10	26	81	08.5	037-	1526	1	-2	21	3						4	X	9	6
31	NW	N76-50.7	W004-07.1	253	10	26	81	12.3	038-	2078	1	-2	21	2	00	0	013	-03.8	-03.8	4	7	8	4
31	NW	N76-59.4	W003-31.0	253	10	26	81	15.4	039-	1718	1	-2	22	2	08	2	012			2	7	8	6
31	NW	N77-02.1	W002-54.9	253	10	26	81	17.3	040-	1978	1	1	21	2	06	3	011	-00.5	-00.5	7	X	9	1
31	NW	N77-04.8	W003-04.3	253	10	26	81	23.1	041-		1	10	11	0	11	3	009			7	X	9	2
31	NW	N77-07.1	W003-13.7	253	10	27	81	02.4	042-	1947	1	8	00	0	01	6	008	-00.5	-00.5	7	X	9	5

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N77-12.3	W003-27.6	253	10	27	81	06.5	043-	2392	1	7	00	0			009			7	X	9	5
31	NW	N77-19.1	W003-54.4	253	10	27	81	10.0	044-	2019	1	7	00	0	10	3	009	01.0	01.2	2	7		6
31	NW	N77-24.8	W004-10.6	253	10	27	81	11.8	045-	1654	1	-2	00	0	10	3	009	01.0	01.2	2	7		6
31	NW	N77-22.7	W004-26.7	253	10	27	81	15.4	046-	1440	1	1	00	0	09	2	010	00.0	00.0	4	X	9	3
31	NW	N77-23.5	W004-38.6	253	10	27	81	18.5	047-	1379	1	5	00	0	13	1	012	-00.2	-00.2	5	7	8	5
31	NW	N77-59.8	W004-02.0	253	10	28	81	10.0	049-	2501	1	0	06	2			020			4	7		5
31	NW	N78-00.0	W003-46.0	253	10	28	81	11.2	050-	2605	1	0	06	2	12	4	021	00.0	00.0	4	7		5
31	NW	N78-00.0	W004-17.4	253	10	28	81	12.9	051-	2250	1	-2	06	3	18	3	021	-00.8	-00.9	2	6	8	7
31	NW	N78-00.3	W004-44.6	253	10	28	81	17.0	052-	1674	1	10	00	0	12	4	024	00.0	00.0	2	7	8	7
31	NW	N77-58.4	W005-19.5	253	10	28	81	20.7	053-	461	1	7	00	0	12	4	025	00.4	00.0	5	7	8	4
31	NW	N78-00.7	W005-43.1	253	10	28	81	23.6	054-	323	1	5	00	0	09	3	026	00.1	-00.2	2	7	8	6
31	NW	N78-00.2	W006-07.8	253	10	29	81	03.3	055-	309	1	9	00	0			025						
31	NW	N78-00.0	W006-30.4	253	10	29	81	05.7	056-	299	1						026						
31	NW	N77-59.1	W007-07.1	253	10	29	81	09.0	057-	346	1												
31	NW	N78-00.2	W007-32.6	253	10	29	81	11.2	058-	282	1	9	00	0	08	4	025	-00.2	-01.0	2			6
31	NW	N78-00.0	W008-02.2	253	10	29	81	13.7	059-	224	1	5	00	0	07	4	024	-00.2	-00.2	7	7	8	4
31	NW	N78-00.6	W008-31.9	253	10	29	81	16.6	060-	215	1	9	00	0	07	4	024	00.0	00.0	7	7	8	4
31	NW	N78-00.2	W008-51.6	253	10	29	81	19.5	061-	213	1	9	00	0	12	4	024	00.5	00.3	7	7	8	4
31	NW	N78-06.0	W009-41.7	253	10	30	81	02.3	062-	191	1	9	00	0		5	024			7	7		4
31	NW	N77-59.8	W010-11.7	253	11	03	81	07.5	063-	190	1	10	00	0									
31	NW	N77-59.8	W010-11.7	253	11	03	81	07.5	063-	190	1	10	00	0									
31	NW	N78-04.5	W009-43.2	253	11	03	81	15.9	064-	199	1	9	00	0	18	3	011	-14.8	-14.9	2	7	2	
31	NW	N78-09.3	W009-01.9	253	11	04	81	09.6	065-	190	1	10	00	0		2		-19.7	-19.7	2			
31	NW	N78-10.7	W008-26.9	253	11	05	81	04.2	066-	217	1	10	00	0	29	2	017	-19.0	-19.0				

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N78-10.2	W007-53.2	253	11	06	81	03.4	067-	211	1	10	00	0	08	5	009	-06.1	-07.4				
31	NW	N78-13.9	W007-20.5	253	11	06	81	05.7	068-	209	1	10	00	0	09	5	008	-04.5	-04.9				
31	NW	N78-13.9	W007-20.5	253	11	06	81	05.7	068-UP	209	1	10	00	0	09	5	008	-04.5	-04.9				
31	NW	N78-20.2	W006-55.6	253	11	06	81	09.1	069-	269	1	10	00	0	10	3	006	-04.5	-04.9				
31	NW	N78-20.2	W006-55.6	253	11	06	81	09.1	069-UP	269	1	10	00	0	10	3	006	-04.5	-04.5				
31	NW	N78-10.7	W006-46.9	253	11	06	81	15.3	070-	287	1	9	00	0	23	5	008	-07.1	-07.7	1	4	6	7
31	NW	N78-10.9	W006-13.1	253	11	07	81	00.0	071-	228	1	10	00	0			013	-13.2	-13.7	0		0	7
31	NW	N78-09.6	W005-17.7	253	11	07	81	11.8	072-	346	1	8	00	0									
31	NW	N78-11.2	W004-56.2	253	11	07	81	14.5	073-	863	1	9	00	0	25	3	007	-08.3	-08.5	4	7	8	4
31	NW	N78-12.5	W004-31.5	253	11	07	81	18.2	074-	1448	1	8	00	0	25	5	010	-11.7	-11.7	0		0	6
31	NW	N78-11.7	W004-12.0	253	11	07	81	22.8	075-	2160	1	8	00	0	22	3	014	-14.8	-14.8	0		0	6
31	NW	N78-08.4	W003-41.8	253	11	08	81	01.9	076-	2474	1	8	00	0	31	4	010	-14.1	-14.0	0		0	6
31	NW	N78-03.8	W003-12.6	253	11	08	81	06.1	077-	2696	3	9	00	0	06	4	003	-11.0	-11.0				
31	NW	N78-05.4	W002-44.5	253	11	08	81	08.5	078-	2738	3	2	00	0		4	012						
31	NW	N78-58.9	E001-18.8	288	11	08	81	23.4	079-	2438	3	0	16	2	19	7	990	00.7	07.7	6	7	8	4
31	NW	N79-03.6	E000-58.1	288	11	09	81	05.5	080-	2697	3	9	00	0	19	6	989	00.7	00.7	1			
31	NW	N79-03.7	E000-32.7	288	11	09	81	10.3	081-	2556	3	10	00	0	22	4	991	-05.4	-05.4	1			6
31	NW	N78-59.8	E000-09.6	288	11	09	81	15.4	082-	2528	1	9	00	0	27	3	991	-09.8	-09.8	7	7	8	4
31	NW	N78-58.3	W000-12.4	253	11	09	81	18.6	083-	2267	3	9	00	0	32	4	992	-14.0	-14.0	1	7	1	5
31	NW	N78-55.8	W000-48.7	253	11	09	81	22.1	084-	2528	1	9	00	0	34	5	992	-15.2	-15.2	1	7	1	5
31	NW	N78-54.3	W001-17.5	253	11	10	81	01.0	085-	2477	1	9	00	0	30	6	992	-15.5	-17.8	1	7		
31	NW	N78-46.0	W001-00.0	253	11	10	81	04.9	086- D	2565	1	8	00	0		7	992			1			
31	NW	N78-45.2	W001-01.6	253	11	10	81	05.1	086- D	2565	1	8	00	0		7	992			1			
31	NW	N78-45.2	W001-01.6	253	11	10	81	05.1	086-UP	2565	1	8	00	0		7	992			1			

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N78-36.3	W000-56.8	253	11	10	81	08.6	087-	2569	1	9	00	0	33	7	993	-16.8	-16.8	1			
31	NW	N78-32.7	W000-33.9	253	11	10	81	11.6	088-		1	8	00	0	33	8	994			1			6
31	NW	N78-08.3	W001-04.2	253	11	10	81	17.9	089-	2798	3	0	30	2	32	6	994			7	X	9	1
31	NW	N77-48.3	W001-48.3	253	11	11	81	00.1	090-	2709	1	0	30	3	31	8	996	-12.0	-12.0	7	X	9	1
31	NW	N77-30.5	W002-42.1	253	11	11	81	07.2	091-	2842	1	0	30	2	33	7	001	-12.3	-12.3	7			
31	NW	N77-08.8	W002-32.6	253	11	11	81	12.6	092-	2996	1	0	34	3	31	6	003	-12.0	-12.0	7	7	8	4
31	NW	N77-00.7	W002-21.2	253	11	11	81	14.4	093-	2933	1	0	34	3	31	6	004	-12.0	-12.0	7	7	8	5
31	NW	N77-00.7	W002-21.2	253	11	11	81	14.4	093-UP	2933	1	0	34	3	31	6	004	-12.0	-12.0	7	7	8	5
31	NW	N76-58.8	W003-04.0	253	11	11	81	17.9	094-	1988	1	5	00	0	30	6	007	-13.2	-13.3	7	7	5	5
31	NW	N76-58.8	W003-04.0	253	11	11	81	17.9	094-UP	1988	1	5	00	0	30	6	007	-13.2	-13.3	7	7	5	5
31	NW	N76-56.8	W003-31.6	253	11	11	81	21.1	095-	1628	1	10	00	0	02	4	018	-15.2	-15.3	7	7	4	6
31	NW	N76-56.8	W003-31.6	253	11	11	81	21.1	095-UP	1628	1	10	00	0	02	4	018	-15.2	-15.3	7	7	4	6
31	NW	N76-58.0	W003-49.3	253	11	12	81	00.0	096-	1862	1	8	00	0	32	4	010	-16.2	-16.2	0		0	6
31	NW	N76-58.0	W003-49.3	253	11	12	81	00.0	096-UP	1862	1	8	00	0	32	4	010	-16.2	-16.2	0		0	6
31	NW	N76-55.7	W004-09.7	253	11	12	81	04.1	097-	1489	1	9	00	0	32	4	011	-16.2	-16.2	0		0	6
31	NW	N76-55.7	W004-09.7	253	11	12	81	04.1	097-UP	1489	1	9	00	0	32	4	011	-16.2	-16.2	0		0	6
31	NW	N76-56.1	W004-31.8	253	11	12	81	06.9	098-	1416	1	7	00	0	24	3	011	-17.0	-17.0	0		0	6
31	NW	N76-56.1	W004-31.8	253	11	12	81	06.9	098-UP	1416	1	7	00	0	24	3	011	-17.0	-17.0	0		0	6
31	NW	N76-59.7	W004-45.6	253	11	12	81	09.4	099-	1445	1	8	00	0	32	4	013	-17.0	-16.9	0		0	6
31	NW	N76-59.7	W004-45.6	253	11	12	81	09.4	099-UP	1445	1	8	00	0	32	4	013	-17.0	-16.9	0		0	6
31	NW	N76-59.4	W005-13.9	253	11	12	81	12.0	100-	1380	1	8	00	0	33	3	013	-16.3	-16.3	0		0	6
31	NW	N76-59.4	W005-13.9	253	11	12	81	12.0	100-UP	1380	1	8	00	0	33	3	013	-16.3	-16.3	0		0	6
31	NW	N76-58.6	W005-36.1	253	11	12	81	14.0	101-	1088	1	8	00	0	33	6	013	-16.4	-16.5	0		0	6
31	NW	N76-58.6	W005-36.1	253	11	12	81	14.0	101-UP	1088	1	8	00	0	33	6	013	-16.4	-16.5	0		0	6

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N77-01.2	W006-03.2	253	11	12	81	17.5	102-	0728	1	10	00	0	30	4	014	-21.0	-20.8	0		0	6
31	NW	N77-01.2	W006-03.2	253	11	12	81	17.5	102-UP	0728	1	10	00	0	30	4	014	-21.0	-20.8	0		0	6
31	NW	N76-54.1	W005-45.2	253	11	13	81	01.6	103-	1191	1	9	00	0	30	3	015	-22.0	-22.0	0		0	6
31	NW	N76-50.1	W005-52.4	253	11	13	81	04.0	104-	1380	1	9	00	0	32	2	016			0		0	6
31	NW	N76-46.0	W006-05.2	253	11	13	81	06.5	105-	1318	1	9	00	0	31	2	016			0		0	6
31	NW	N76-40.0	W006-23.8	253	11	13	81	09.7	106-	1398	1	9	00	0	24	2	015	-21.2	-20.5	0		0	6
31	NW	N76-34.7	W006-20.7	253	11	13	81	12.3	107-	1400	1	10	00	0	25	3	016	-22.0	-22.0	0		0	6
31	NW	N76-29.4	W006-07.6	253	11	13	81	13.9	108-	1985	1	6	00	0	23	3	017	-16.2	-16.2	0		0	6
31	NW	N76-34.4	W005-51.2	253	11	13	81	16.3	109-	2006	1	5	00	0	23	3	016	-15.7	-15.7	0		0	6
31	NW	N76-35.0	W005-33.4	253	11	13	81	18.4	110-	2078	1	10	00	0	22	4	016	-16.1	-16.1	0		0	6
31	NW	N76-36.1	W005-02.4	253	11	13	81	23.7	111-	2258	1	10	00	0	15	2	014			7	7	4	6
31	NW	N76-39.6	W004-45.2	253	11	14	81	01.6	112-	2203	1	9	00	0	08	3	012			7			
31	NW	N76-38.5	W004-17.5	253	11	14	81	05.8	113-	2569	3	9	00	0		3	005	-02.8	-03.2	7			
31	NW	N76-45.3	W004-20.4	253	11	14	81	08.5	114-	2228	1	7	00	0	20	5	003	-03.0	-03.5	1			
31	NW	N76-49.8	W004-18.4	253	11	14	81	11.1	115-	1837	1	7	00	0	19	2	002	-02.8	-03.2	1			
31	NW	N76-56.4	W004-19.1	253	11	14	81	14.7	116-	1538	1	7	00	0	13	4	997	-01.6	-02.0	1	7	8	6
31	NW	N77-01.7	W004-10.4	253	11	14	81	16.8	117-	1718	1	9	00	0	09	5	994	-01.7	-01.7	7	X	9	3
31	NW	N77-00.0	W004-48.4	253	11	14	81	18.8	118-	1538	1	9	00	0	08	5	988	-01.2	-01.3	7	X	9	3
31	NW	N77-00.0	W004-26.3	253	11	14	81	21.2	119-	1628	1	9	00	0	09	5	982	-00.5	-00.5	7	X	9	3
31	NW	N77-00.1	W004-05.0	253	11	15	81	00.2	120-	1837	1	8	00	0	18	3	982	-01.2	-01.2	1			
31	NW	N77-00.9	W003-42.1	253	11	15	81	02.6	121-	1874	1	5	00	0	15	4	981			1			
31	NW	N76-58.4	W003-08.0	253	11	15	81	05.5	122-	1764	1	3	00	0		4	982			1			
31	NW	N76-18.0	W007-19.6	253	10	19	81	01.1	012-	1289	1	5	00	0			008	-06.2	-07.0				
31	NW	N76-50.3	W008-55.6	253	10	21	81	08.4	021-	0356	1	10	00	0	26	2	012	-08.8	-09.0	7	7	4	6

STATION DATA MIZLANT 81 (ARCTIC EAST 1981)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N76-32.7	W007-13.2	253	10	25	81	06.9	027-	0875	1	9	00	0	09	3	008	-01.6	-01.8	7	X	9	6
31	NW	N77-39.8	W003-48.9	253	10	28	81	03.8	048-	2252	1	-2	06	3	15	4	018	-01.8	-02.0	4	X	9	
31	NW	N78-10.9	W006-13.1	253	11	07	81	00.0	071-	0228	1	10	00	0			013	-13.2	-13.7	0		0	7

TOTAL= 171

APPENDIX B

Property Profiles For MIZLANT 81 Stations

This section contains plots of temperature, salinity, sound speed, and sigma-t for the 122 stations of MIZLANT 81 which were recovered from the cassette tapes of the data-logging system. Both down and up traces were obtained at each station; however, the up trace was recorded only on about half of the stations. To illustrate the change in property profile with time, a sampling of both down and up traces is included between Stations 86 and 102. Where this is done the down trace is on the left.

Temperature has a small range for stations well within the ice pack whereas, east of the ice, the temperature has a moderate range and the salinity a small range. In order to show the property variations with maximum resolution the property scales have been expanded. This has the concomitant result that the scales must vary from page to page. In some cases, the same stations have been plotted on two different scales.

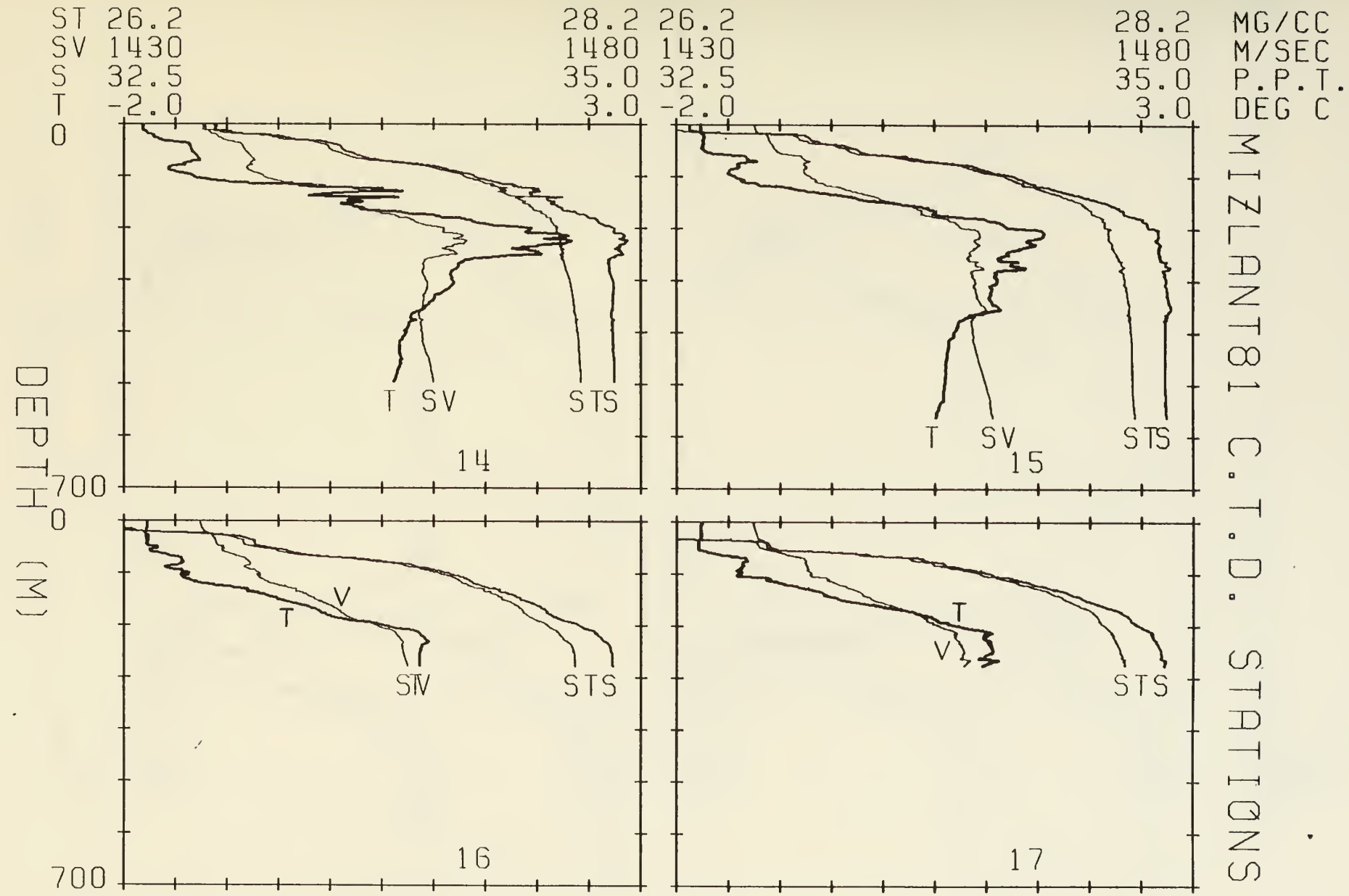
The stations are plotted four per page. To assist in distinguishing between curves the temperature profile has been darkened three times while the salinity trace only twice. The curves are also labeled: T for temperature, S

for salinity, SV for sound velocity, and ST for sigma-t. The plots of Station 86 may appear confusing. The first plot is for 86-Down; computer memory was used up before the lowering was completed and a short section of the continuation of this lowering to greater depth was recorded as 86-2-D and is shown in the next frame. Finally, the up trace, starting at the deepest depth of 86-2-D, is shown at the right, failing to reach the surface before the memory was full.

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.0
3.0
26.2
1430
32.5
-2.0
ST
SV
S
T
0
700
DEPTH (M)
1
2
3
4

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST
SV
S
T
5
6
7
8
DEPTH (M)
0
700

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.0
3.0
26.2
1430
32.5
-2.0
S
ST
T
SV
10
STS
13
9
11
V
DEPTH (M)
0
700


ST 26.2 28.2 26.2 28.2 MG/CC
SV 1430 1480 1430 1480 M/SEC
S 32.5 35.0 32.5 35.0 P.P.T.
T -2.0 3.0 -2.0 3.0 DEG C
MIZLANT81 C.T.D. STATIONS
DEPTH (M)
0
700
T SV STS
14
15
T V STS
16
17

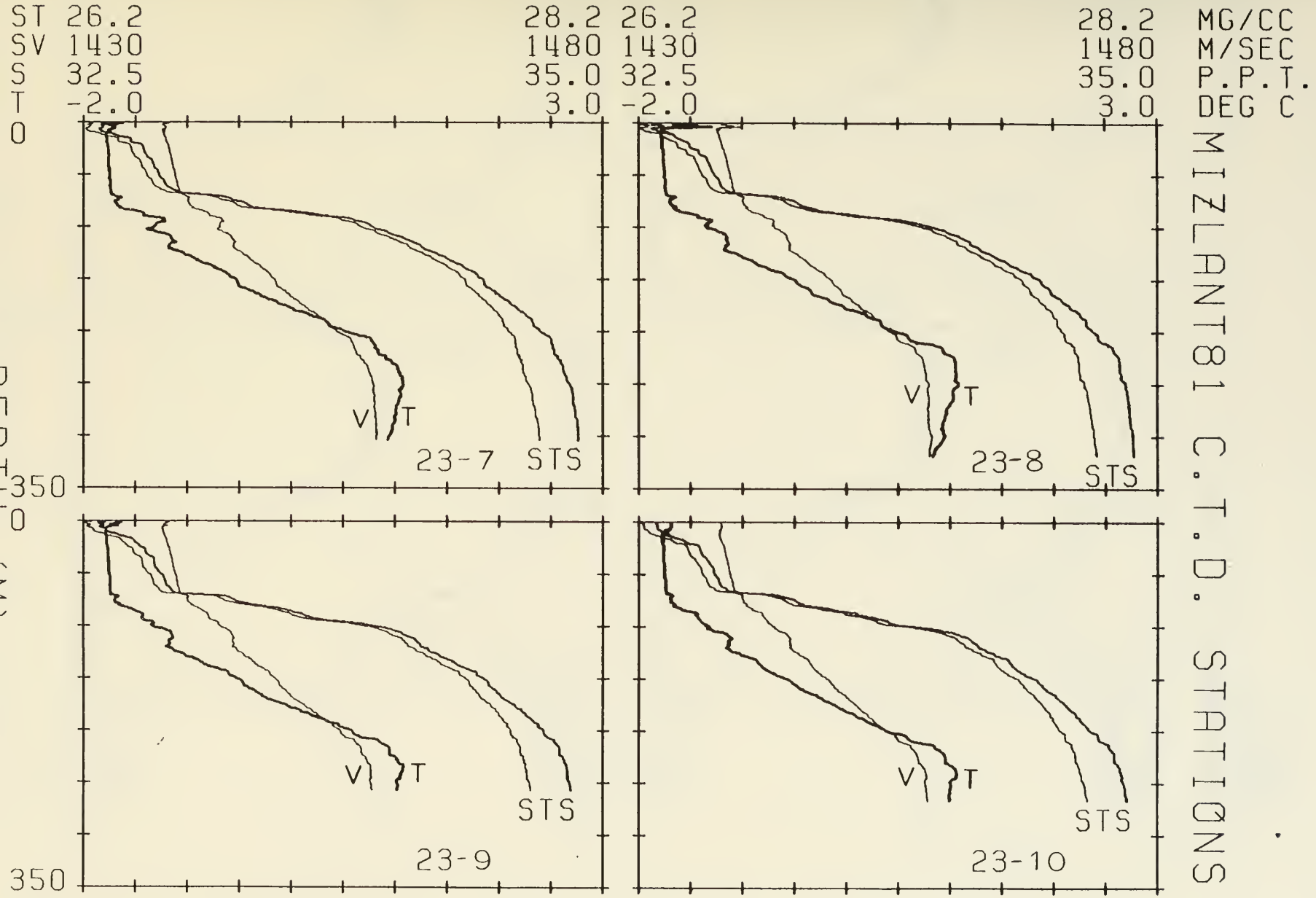
MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.0
3.0
26.2
1430
32.5
-2.0
ST
SV
S
T
0
700
DEPTH (M)
19
22-1
18
20
STS

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST
SV
S
T
0
26.2
1430
32.5
-2.0
28.2
1480
35.0
3.0
350
DEPTH (M)
22-2
22-3
22-4
22 5
S
ST
STS
T
V

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.0
3.0
26.2
1430
32.5
-2.0
ST
SV
S
T
0
350
DEPTH (M)
STS
V
T
22-7
22-9
22-6
22-8

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 26.2 28.2
SV 1430 1480
S 32.5 35.0
T -2.0 3.0
0
350
DEPTH (M)
22-10
22-11
23-1
23-2
STS
SVT
T
V

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 26.2
SV 1430
S 32.5
T -2.0
0
350
DEPTH (M)
28.2 26.2
1480 1430
35.0 32.5
3.0 -2.0
STS
T
V
23-4
23-6
23-3
23-5


ST 26.2 28.2 26.2 28.2 MG/CC
SV 1430 1480 1430 1480 M/SEC
S 32.5 35.0 32.5 35.0 P.P.T.
T -2.0 3.0 -2.0 3.0 DEG C
MIZLANT81 C.T.D. STATIONS
DEPTH (M)
0
350
0
350
V
T
STS
23-7
23-8
23-9
23-10

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23-12
23-14
23-11
23-13
ST
S
T
V
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
S
T
V
23-16
23-18
23-15
23-17
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23-20
23-22
23-19
23-21
ST
S
V
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)
23-23
24
25
26
ST
S
V
T

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
V
28
30
26
29
0
350
DEPTH (M)

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MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
28.2
1480
35.2
3.1
SS
SV
T
31
32
33
34
0
700
DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
SS
T
SV
36
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SS
T
SV
38
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SS
T
SV
35
SS
T
SV
37
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
SV
T
40
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
42
39
41
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)

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MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
44
46
43
45
0
700
DEPTH (M)

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MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
-1.9
30.2
1430
23.2
ST
SV
S
T
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2 1430 30.2 -1.9
SV 1480 35.2 3.1
S
T
0
700
DEPTH (M)
52
53
54
55
SST
TSV

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MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
0
700
SST
TSV
SV
T
57
56
59
58
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
28.2
1480
35.2
3.1
SST
TSV
60
61
62
63
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
TSV
64
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
66
63
65
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
TSV
68
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
69
67
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2 1430 30.2 -1.9
SV 1480 35.2 3.1
S
T
0
350
DEPTH (M)
SST
TSV
69
70
71
72

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
ST
74
SV
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
ST
76
SV
ST 23.2
SV 1430
S 30.2
T -1.9
0
73
350
DEPTH (M)
SST
T SV
SV T
75

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SS
SV
78
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SS
SV
80
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SS
SV
77
T
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
SS
TSV
79
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)
81
82
83
84
SS
SV
T

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
-1.9
30.2
1430
23.2
SST
SV
T
86
85
700
0
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
SV
86
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SST
SV
86
T
ST 23.2
SV 1430
S 30.2
T -1.9
0
1400
DEPTH (M)
0
1400

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
ST
SV
T
88
90
87
89
-1.9
30.2
1430
23.2
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
92
T
SV
93
23.2
1430
30.2
-1.9
91
ST
SV
S
T
0
350
DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
SS
T SV
92
93
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
91
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
0
350
DEPTH (M)
94
95
96

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT.81 C.T.D. STATIONS
28.2
1480
35.2
3.1
SS
SV 94
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SS
SV 95
T
ST 23.2
SV 1430
S 30.2
T -1.9
SS
SV 94
T
SS
SV 95
T
0
700
0
700
DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
ST 23.2
SV 1430
S 30.2
T -1.9
SST
SV
T
96
97
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
0
700
SS
SV
T
96
97
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
98
99
0
350
DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2
1480
35.2
3.1
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
ST
SV
S
T
98
99
T SV
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
ST
SV
S
T
100
101
0
700
DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C
MIZLANT81 C.T.D. STATIONS
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
ST
SV
T
0
700
102
104
103
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
28.2
1480
35.2
3.1
0
700
DEPTH (M)
S
T
SV
105
106
107
108

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
23.2
1430
30.2
-1.9
SS
SV
110
T
112
111
109
ST
SV
S
T
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
28.2
1480
35.2
3.1
SS
SV
T
113
114
115
116
SST
0
700
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)
28.2
1480
35.2
3.1
118
117
119
120
S
T
SV
ST

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
SV
122
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SST
SV
121
T
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)
0
700

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
27
SV
T
28.2 23.2
1480 1430
35.2 30.2
3.1 -1.9
SST
12
SV
T
ST 23.2
SV 1430
S 30.2
T -1.9
0
700
DEPTH (M)
0
700

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
ST
SV
48
23.2
1430
30.2
-1.9
21
71
TSV
SST
ST 23.2
SV 1430
S 30.2
T -1.9
0
350
DEPTH (M)

MIZLANT81 C.T.D. STATIONS
MG/CC
M/SEC
P.P.T.
DEG C
28.2
1480
35.2
3.1
SST
SV
T
7
10
1
9
23.2
1430
30.2
-1.9
ST
0
1400
DEPTH (M)

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